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United States Department of Agriculture,

OFFICE OF THE SECRETARY—Circular No. 43.

THE ADULTERATION AND MISBRANDING OF THE SEEDS OF KENTUCKY BLUEGRASS, REDTOP, AND ORCHARD GRASS.

During the calendar year 1912, seeds of Kentucky bluegrass, redbtop, and orchard grass were secured in the open market in accordance with the following paragraph in the act of Congress making appropriations for the Department of Agriculture:

Where such samples [seeds of grasses, clover, or alfalfa secured in the open market] are found to be adulterated or misbranded, the results of the tests shall be published, together with the names of the persons by whom the seeds were offered for sale.

In carrying out the provisions of this act 1,344 samples of the seeds enumerated above were secured and analyses made under the direction of Mr. E. Brown, Botanist in Charge of the Seed Laboratory, and publication is here made of the analyses of the 189 samples found to be adulterated or misbranded, together with the names of the seedsmen by whom they were offered for sale.

KENTUCKY BLUEGRASS.

Of the 499 samples of Kentucky bluegrass seed obtained, 62 were found to be either adulterated or misbranded, 36 samples containing less than 3 per cent of Kentucky bluegrass. An average of 59 per cent of Canada bluegrass seed was found in 53 samples. Two samples were mixtures of redbtop and timothy and 7 were adulterated with rye-grass, redbtop, timothy, or crested dog's-tail.

TABLE I.—Results of tests of samples of seed obtained in the open market as Kentucky bluegrass seed and found to be adulterated or misbranded.

Seed offered for sale or sold as Kentucky bluegrass by—		Seed obtained by—	Seeds and inert matter found upon analysis of samples.			
Name of dealer.	Address.		Kentucky bluegrass seed.	Canada bluegrass seed.	Other seeds.	Dirt and chaff.
Adams Co., B. F.....	116 South Washington Street, Peoria, Ill.	Purchase (bulk).	<i>Per ct.</i> 27.82	<i>Per ct.</i> 47.18	<i>Per ct.</i> 5.05	<i>Per ct.</i> 19.34
Archias Seed Store....	Sedalia, Mo.....	.....do.....	57.21	14.30	4.00	24.49
Bard Hardware Co.....	800 Penn Street, Reading, Pa.	Mail (sample)...	1.27	58.80	11.02	28.31
Do.....	.....do.....	Purchase (bulk).	.81	79.87	3.20	16.12
Busch Seed Co., W. J.	600 Massachusetts Street, Lawrence, Kans.	.....do.....	1.51	74.04	5.87	18.60

TABLE I.—Results of tests of samples of seed obtained in the open market as Kentucky bluegrass seed and found to be adulterated or misbranded—Continued.

Seed offered for sale or sold as Kentucky bluegrass by—		Seed obtained by—	Seeds and inert matter found upon analysis of samples.			
Name of dealer.	Address.		Kentucky bluegrass seed.	Canada bluegrass seed.	Other seeds.	Dirt and chaff.
Central Grain Store...	357 Common Street, Lawrence, Mass.	Mail (sample)...	Per ct. 34.86	Per ct. 42.09	Per ct. 1.31	Per ct. 21.74
Do.....	do.....	Purchase (bulk)	36.55	42.23	1.86	19.36
Champaign Seed Co....	Champaign, Ill.....	do.....	64.04	12.56	1.34	22.06
Chester Milling Co.....	Chester, Pa.....	Mail (sample)...	1.90	57.55	12.94	27.61
Do.....	do.....	Purchase (bulk)	2.06	55.20	14.31	28.43
Cover, U. J.....	Mount Gilead, Ohio.....	Mail (sample)...	12.53	64.80	4.19	18.48
Do.....	do.....	Purchase (bulk)	1.01	76.88	8.34	13.77
Do.....	do.....	Mail (sample)...	8.25	73.48	4.82	13.45
Do.....	do.....	Purchase (bulk)	1.48	80.66	7.87	9.99
Craig & Co., Edmond.	320 East Markham Street, Little Rock, Ark.	Mail (sample)...	.....	.....	1 64.06	35.94
Do.....	do.....	Purchase (bulk)	.....	.....	2 68.94	31.06
Fredonia Seed Co.....	28 Water Street, Fredonia, N. Y.	Mail (sample)...	.57	81.10	4.31	14.02
Do.....	do.....	Purchase (bulk)	.48	79.83	4.29	15.40
Gate City Seed Co.....	Keokuk, Iowa.....	Mail (sample)...	21.02	40.43	2.43	36.12
Do.....	do.....	Purchase (bulk)	22.74	46.95	2.14	28.17
Gawne & Co., H. C.....	Cleveland, Ohio.....	Mail (sample)...	.99	64.96	12.41	21.64
Do.....	do.....	Purchase (bulk)	.81	56.66	15.56	26.97
Graf, H. L.....	313 State Street, New Albany, Ind.	Mail (sample)...	.08	81.08	5.12	13.72
Do.....	do.....	Purchase (bulk)	.59	83.86	5.76	9.79
Griffin Co., H. L.....	2364 Wall Avenue, Ogden, Utah.	Mail (sample)...	38.51	37.44	1.65	22.40
Do.....	do.....	Purchase (bulk)	39.73	41.85	2.44	15.98
Harper Seed Co., The.	Goshen, Ind.....	Mail (sample)...	29.95	40.19	4.17	25.69
Do.....	do.....	Purchase (bulk)	26.68	42.63	4.02	26.67
Henry & Missert.....	92 Michigan Street, Buffalo, N. Y.	do.....	4.09	64.06	13.22	18.63
Hoermann, Frank.....	317 Wabash Avenue, Terre Haute, Ind.	do.....	.26	87.74	1.58	10.42
Huntington Seed Store	141 East Market Street, Indianapolis, Ind.	do.....	54.62	6.75	1.71	36.92
Kimmel, Clem L.....	146 East Third Street, Dayton, Ohio.	Mail (sample)...	1.06	69.83	5.35	23.76
Do.....	do.....	Purchase (bulk)	.65	71.26	6.33	21.76
La Rose Grain Co.....	La Rose, Ill.....	Mail (sample)...	24.37	.....	3 61.39	14.24
Do.....	do.....	Purchase (bulk)	25.59	.....	4 59.15	15.26
Moore Seed Co., The..	125 Market Street, Philadelphia, Pa.	Mail (sample)...	1.26	68.93	5.19	24.62
Do.....	do.....	Purchase (bulk)	1.03	72.60	5.97	20.40
Murray, James C.....	Peoria, Ill.....	do.....	1.18	67.91	13.30	17.61
Muzzy Bros.....	136 Main Street, Paterson, N. J.	do.....	2.00	72.11	7.29	18.60
Neely & Ferral.....	320 South Piedmont Street, Canton, Ohio.	Mail (sample)...	8.40	56.21	8.10	27.29
Do.....	do.....	do.....	2.09	72.64	5.51	19.76
Do.....	do.....	Purchase (bulk)	1.11	68.16	8.55	22.18
New Albany Supply Co.	223 State Street, New Albany, Ind.	do.....	1.96	76.51	6.95	14.58
Payne, Theodore.....	345 South Main Street, Los Angeles, Cal.	Mail (sample)...	60.13	18.41	3.57	17.89
Do.....	do.....	Purchase (bulk)	64.46	14.06	2.69	18.79
Phillips-Thompson Co.	Fourth and French Streets, Wilmington, Del.	do.....	68.72	.....	5 10.75	20.53
Riese, Henry A.....	107 East Front Street, Bloomington, Ill.	Mail (sample)...	71.94	.....	6 14.50	13.56
Do.....	do.....	Purchase (bulk)	77.55	.....	7 12.61	9.84
Roat Supply Co., A. J.	600 Market Street, Kingston, Pa.	Mail (sample)...	.30	73.96	6.37	19.37
Do.....	do.....	Purchase (bulk)	.59	73.70	7.99	17.72

¹ Redtop or bent-grass, 59.87 per cent; timothy, 3.07 per cent.

² Redtop or bent-grass, 64.43 per cent; timothy, 3.26 per cent.

³ Rye-grass, 29.36 per cent; redtop or bent-grass, 16.86 per cent; timothy, 3.20 per cent.

⁴ Rye-grass, 17.79 per cent; redtop or bent-grass, 25.56 per cent; timothy, 4.87 per cent.

⁵ Crested dog's-tail, 8.33 per cent.

⁶ Timothy, 14.41 per cent

⁷ Timothy, 12.51 per cent.

TABLE I.—Results of tests of samples of seed obtained in the open market as Kentucky bluegrass seed and found to be adulterated or misbranded—Continued.

Seed offered for sale or sold as Kentucky bluegrass by—		Seed obtained by—	Seeds and inert matter found upon analysis of samples.			
Name of dealer.	Address.		Kentucky bluegrass seed.	Canada bluegrass seed.	Other seeds.	Dirt and chaff.
Schutz, A.....	152 East State Street, Hammond, Ind.	Mail (sample)...	<i>Per ct.</i> 1.81	<i>Per ct.</i> 76.80	<i>Per ct.</i> 5.22	<i>Per ct.</i> 16.17
Do.....	do.....	Purchase (bulk)...	1.18	77.44	8.92	12.46
Seobie & Parker Co....	507 Liberty Street, Pittsburgh, Pa.	Mail (sample)...	.83	51.77	5.35	12.02
Do.....	do.....	Purchase (bulk)...	.61	86.34	4.44	8.61
Western Seed Co., The	Fifteenth and Blake Streets, Denver, Colo.	Mail (sample)...	54.31	.....	23.49	22.20
Do.....	do.....	Purchase (bulk)...	39.11	.....	24.91	35.98
Willis, W. H.....	Albion, N. Y.....	Mail (sample)...	.96	62.27	15.28	21.49
Do.....	do.....	Purchase (bulk)...	.30	59.11	21.32	19.27
Young & Sons Co., C.....	1406 Olive Street, St. Louis, Mo.	Mail (sample)...	36.93	40.98	2.52	19.57
Do.....	do.....	Purchase (bulk)...	39.98	41.28	2.20	16.54
Yuess Gardens Co.....	Newburgh, N. Y.....	Mail (sample)...	1.82	68.33	6.55	23.30
Do.....	do.....	Purchase (bulk)...	1.78	75.69	3.16	19.37

¹ Redtop or bent-grass, 22.2 per cent.

² Redtop or bent-grass, 22.73 per cent.

REDTOP.

Of the 538 samples obtained as redtop seed, 115 were found to be adulterated with timothy.

TABLE II.—Results of tests of samples of seed obtained in the open market as redtop seed and found to be adulterated or misbranded.

Seed offered for sale or sold as redtop by—		Seed obtained by—	Seeds and inert matter found upon analysis of samples.			
Name of dealer.	Address.		Redtop seed.	Timothy seed.	Other seeds.	Dirt and chaff.
Bailey & Sons Co.....	61 East Second South Street, Salt Lake City, Utah.	Mail (sample)...	<i>Per ct.</i> 74.60	<i>Per ct.</i> 11.57	<i>Per ct.</i> 1.32	<i>Per ct.</i> 12.51
Do.....	do.....	Purchase (bulk)...	77.52	9.03	.58	12.87
Baird Co., C. R.....	1-7 Williams Street, Chattanooga Tenn.	Mail (sample)...	78.56	6.42	1.58	13.44
Do.....	do.....	Purchase (bulk)...	76.94	6.05	1.35	15.66
Breck & Sons, Joseph..	51 North Market Street, Boston, Mass.	Mail (sample)...	77.85	6.04	2.01	14.10
Do.....	do.....	Purchase (bulk)...	74.48	7.62	2.19	15.71
Brown, Arthur S.....	Manchester, N. H.....	Mail (sample)...	81.10	12.54	.19	6.17
Do.....	do.....	Purchase (bulk)...	83.24	9.78	.28	6.70
Buffington & Co., John J.	5 West Lombard Street, Baltimore, Md.	Mail (sample)...	56.34	10.68	2.95	30.03
Do.....	do.....	Purchase (bulk)...	60.35	8.70	2.42	28.53
Burnett Bros.....	72 Cortlandt Street, New York, N. Y.	Mail (sample)...	73.93	13.13	.37	12.57
Do.....	do.....	Purchase (bulk)...	70.54	9.88	1.06	18.52
Butzer, J. J.....	188 Front Street, Portland, Oreg.	Mail (sample)...	68.70	9.72	2.04	19.54
Do.....	do.....	Purchase (bulk)...	68.67	7.76	2.04	21.53
Central Grain Store...	357 Common Street, Lawrence, Mass.	Mail (sample)...	75.80	7.94	2.03	14.23
Do.....	do.....	Purchase (bulk)...	72.17	9.37	2.25	16.21
Champaign Seed Co....	10 East University Avenue, Champaign, Ill.	do.....	76.47	7.72	1.93	13.88

TABLE II.—Results of tests of samples of seed obtained in the open market as redtop seed and found to be adulterated or misbranded—Continued.

Seed offered for sale or sold as redtop by—		Seed obtained by—	Seeds and inert matter found upon analysis of samples.			
Name of dealer.	Address.		Redtop seed.	Timothy seed.	Other seeds.	Dirt and chaff.
Chandler's Sons, C....	Broadway and Central Avenue, Cleveland, Ohio.	Mail (sample)...	<i>Per ct.</i> 85.33	<i>Per ct.</i> 7.67	<i>Per ct.</i> 0.19	<i>Per ct.</i> 6.81
Do.....	.....do.....	Purchase (bulk)...	84.76	7.09	.29	7.86
Crosman Bros.....	903 Monroe Avenue, Rochester, N. Y.	Mail (sample)...	57.61	9.30	.37	32.72
Do.....	.....do.....	Purchase (bulk)...	56.88	7.02	1.35	34.75
Davis, Frank E.....	134 Columbus Avenue, Sandusky, Ohio.	Mail (sample)...	82.26	10.11	.40	7.23
Do.....	.....do.....	Purchase (bulk)...	83.14	7.81	.38	8.67
Dickinson Co., A.....	West Taylor Street and the River, Chicago, Ill.	Mail (sample)...	67.94	7.85	1.91	22.30
Do.....	.....do.....	Purchase (bulk)...	67.01	6.02	1.31	25.66
Ebbert Seed Co., The..	412 South Main Street, Rocky Ford, Colo.	Mail (sample)...	74.17	7.78	2.87	15.18
Do.....	.....do.....	Purchase (bulk)...	71.25	9.36	2.25	17.14
Farmer Seed & Nursery Co.	Faribault, Minn.....	Mail (sample)...	75.41	18.41	.10	6.08
Do.....	.....do.....	Purchase (bulk)...	67.72	10.67	2.09	19.52
Funk Bros.' Seed Co..	403 North East Street, Bloomington, Ill.	Mail (sample)...	77.65	14.78	.91	6.66
Do.....	.....do.....	Purchase (bulk)...	78.60	13.54	.95	6.91
Gordinier & Sons Co., H. W.	Troy, N. Y.....	Mail (sample)...	83.77	9.28	.18	6.77
Do.....	.....do.....	Purchase (bulk)...	84.66	8.06	.29	6.99
Graf, H. L.....	313 State Street, New Albany, Ind.	Mail (sample)...	76.67	9.19	.36	13.78
Do.....	.....do.....	Purchase (bulk)...	75.89	10.05	.98	13.08
Hardin, Hamilton & Lewman.	217 West Main Street, Louisville, Ky.	Mail (sample)...	57.71	10.69	3.79	27.81
Do.....	.....do.....	Purchase (bulk)...	58.28	11.62	3.05	27.05
Harry, Winfield S....	Conshohocken, Pa.....	.....do.....	78.72	6.63	1.23	13.42
Hetherington Seed & Grocery Co.	Hillsboro, Ohio.....	Mail (sample)...	63.43	8.90	3.56	24.11
Do.....	.....do.....	Purchase (bulk)...	66.60	6.93	2.31	24.16
Hubbard's Seed House.	520 Kansas Avenue, Topeka, Kans.	Mail (sample)...	65.24	30.28	.29	4.19
Do.....	.....do.....	Purchase (bulk)...	79.26	15.65	.20	4.89
Kay Elevator Co., W. O.	Salt Lake City, Utah.....	.....do.....	70.70	13.33	2.26	13.71
Kimmet, Clem L....	Dayton, Ohio.....	Mail (sample)...	.17	9.48	¹ 67.91	22.44
Do.....	.....do.....	Purchase (bulk)...	4.39	6.82	² 66.17	22.62
McLaughlin, Ward & Co.	140 East Pearl Street, Jackson, Mich.	Mail (sample)...	67.47	10.08	3.07	19.38
Do.....	.....do.....	Purchase (bulk)...	67.11	11.47	3.19	18.23
Mace & Mansfield....	620 Broadway, Greenville, Ohio.	Mail (sample)...	34.50	11.88	2.58	51.04
Do.....	.....do.....	Purchase (bulk)...	36.85	10.07	3.03	50.05
Marlow Seed Co.....	119 West Douglas Avenue, Wichita, Kans.	Purchase (bulk)...	79.33	5.46	4.65	10.56
National Seed Co.....	101 West Main Street, Louisville, Ky.	Mail (sample)...	41.59	11.31	3.83	43.27
Do.....	.....do.....	.....do.....	77.63	9.10	.28	12.99
Do.....	.....do.....	Purchase (bulk)...	76.62	9.90	.28	13.20
Peppard Seed Co., J. G.	1101 West Eighth Street, Kansas City, Mo.	Mail (sample)...	56.81	9.79	2.50	30.90
Do.....	.....do.....	Purchase (bulk)...	56.99	10.70	3.09	29.22
Perry, Wilford.....	Provo, Utah.....	Mail (sample)...	73.68	10.62	2.07	13.63
Do.....	.....do.....	Purchase (bulk)...	72.42	5.82	2.90	18.86
Petersen Commission Co., Jul.	709 Carroll Street, St. Louis, Mo.	Mail (sample)...	75.41	8.97	1.16	14.46
Do.....	.....do.....	Purchase (bulk)...	75.74	8.30	1.85	14.11
Phillips' Sons, J. M....	Mercersburg, Pa.....	Mail (sample)...	62.87	24.95	.68	11.50
Do.....	.....do.....	Purchase (bulk)...	65.39	21.80	1.00	11.81
Phillips & Co., William T.	519 Monroe Street, Toledo, Ohio.	Mail (sample)...	65.37	7.10	1.95	25.58
Do.....	.....do.....	Purchase (bulk)...	64.67	7.54	1.94	25.85
Pittsburg Elevator Co., The.	Pittsburg, Kans.....	Mail (sample)...	75.50	9.24	1.03	14.23
Do.....	.....do.....	.....do.....	64.50	24.35	1.94	9.21
Do.....	.....do.....	Purchase (bulk)...	62.32	27.54	1.93	8.21

¹ Canada bluegrass, 63.21 per cent.² Canada bluegrass, 60.98 per cent.

TABLE II.—Results of tests of samples of seed obtained in the open market as redtop seed and found to be adulterated or misbranded—Continued.

Seed offered for sale or sold as redtop by—		Seed obtained by—	Seeds and inert matter found upon analysis of samples.			
Name of dealer.	Address.		Redtop seed.	Timothy seed.	Other seeds.	Dirt and chaff.
Platt Co., Frank S.....	350 State Street, New Haven, Conn.	Purchase (bulk)..	Per ct. 52.07	Per ct. 6.74	Per ct. 1.06	Per ct. 40.13
Poole's Seed & Implement Co.	1720 Pacific Avenue, Tacoma, Wash.	Mail (sample)...	70.53	11.69	2.22	15.56
Do.....	do.....	Purchase (bulk)..	72.86	11.40	2.83	12.91
Portland Seed Co.....	180 Front Street, Portland, Oreg.	Mail (sample)...	72.58	9.39	1.95	16.08
Do.....	do.....	Purchase (bulk)..	70.22	8.58	1.97	19.23
Do.....	do.....	Mail (sample)...	69.32	9.78	2.19	18.71
Do.....	do.....	Purchase (bulk)..	69.38	10.47	2.76	17.39
Rapier Grain & Seed Co.	Owensboro, Ky.....	do.....	68.70	5.65	1.20	24.45
Reyburn, T. T.....	Fifth and Cherokee Streets, Leavenworth, Kans.	Mail (sample)...	63.01	29.33	1.15	15.51
Do.....	do.....	Purchase (bulk)..	63.53	19.89	1.22	15.36
Riese, Henry A.....	Bloomington, Ill.....	Mail (sample)...	78.32	12.65	.19	8.84
Do.....	do.....	Purchase (bulk)..	80.64	10.48	.18	8.70
Roat Supply Co., A. J.	660 Market Street, Kingston, Pa.	do.....	69.29	7.77	2.94	20.00
Ross Bros.....	Wichita, Kans.....	do.....	59.69	10.84	4.04	25.43
Ross Bros. Co.....	88 Front Street, Worcester, Mass.	Mail (sample)...	87.14	5.80	.29	6.77
Do.....	do.....	Purchase (bulk)..	86.22	5.90	.29	7.59
Ross Seed Co.....	118 North Second Street, Louisville, Ky.	Mail (sample)...	75.22	7.01	1.92	15.85
Do.....	do.....	Purchase (bulk)..	74.53	6.89	1.13	17.45
Scarlett & Co., William G.	729 East Pratt Street, Baltimore, Md.	Mail (sample)...	67.45	18.81	.97	12.77
Do.....	do.....	do.....	47.09	25.47	2.47	24.97
Do.....	do.....	Purchase (bulk)..	47.02	26.86	2.84	23.23
Sevin, Vincent & Co...	621 Sansome Street, San Francisco, Cal.	Mail (sample)...	73.46	8.78	2.22	15.54
Do.....	do.....	Purchase (bulk)..	75.07	7.86	2.33	14.74
Sprecher & Ganss.....	25 East King Street, Lancaster, Pa.	Mail (sample)...	78.66	9.39	1.18	10.77
Do.....	do.....	Purchase (bulk)..	78.60	7.67	1.14	12.59
State Nursery Co.....	Helena, Mont.....	Mail (sample)...	82.63	9.88	1.16	6.33
Do.....	do.....	Purchase (bulk)..	81.64	10.64	1.04	6.68
Steckler Seed Co., J.....	512 Gravier Street, New Orleans, La.	Mail (sample)...	19.31	27.72	4.12	48.85
Do.....	do.....	Purchase (bulk)..	18.25	28.24	4.13	49.38
Stone & Co., B. S.....	Mexico, N. Y.....	Mail (sample)...	32.81	12.21	3.72	51.26
Do.....	do.....	Purchase (bulk)..	33.96	13.15	2.98	49.91
Sullivan's Bird Store..	534 Fifteenth Street, Denver, Colo.	Mail (sample)...	54.44	19.93	3.80	21.83
Do.....	do.....	Purchase (bulk)..	50.00	19.70	4.03	26.27
Theilmann Seed Co.....	1517 State Street, Erie, Pa...	Mail (sample)...	81.55	9.75	1.05	7.65
Do.....	do.....	Purchase (bulk)..	79.17	7.81	1.25	11.77
Vogeler Seed & Produce Co.	60 West First South Street, Salt Lake City, Utah.	Mail (sample)...	70.78	10.91	2.89	15.42
Do.....	do.....	Purchase (bulk)..	68.90	14.11	2.97	14.02
Warner Bros.....	112 East Wayne Street, South Bend, Ind.	Mail (sample)...	75.15	7.86	2.14	14.85
Do.....	do.....	Purchase (bulk)..	64.09	14.38	3.05	18.48
Williamson & Son, Sam.	McCornick Block, Salt Lake City, Utah.	Mail (sample)...	75.47	10.22	1.06	13.25
Do.....	do.....	do.....	79.57	13.43	1.99	5.01
Do.....	do.....	Purchase (bulk)..	77.01	8.94	1.08	12.97
Wood-Curtis Co.....	Sacramento, Cal.....	do.....	70.72	14.73	1.34	13.21
Yopp Seed Co., M. J....	124 South Second Street, Paducah, Ky.	do.....	76.77	6.98	2.29	13.96
Younkerman Seed Co.	164 Broadway, Council Bluffs, Iowa.	Mail (sample)...	68.20	9.61	2.88	19.31
Do.....	do.....	do.....	54.61	6.92	1.16	37.31
Do.....	do.....	Purchase (bulk)..	67.84	7.80	1.91	22.45
Yness Gardens Co.....	91 Water Street, Newburgh, N. Y.	Mail (sample)...	78.89	6.45	1.32	13.34
Do.....	do.....	Purchase (bulk)..	75.07	8.85	.57	15.51

ORCHARD GRASS.

Of the 307 samples obtained as orchard grass seed, 7 were found to be adulterated with rye-grass, chess, tall meadow oat-grass, and redtop, while 3 samples were rye-grass seed sold or offered for sale as orchard grass seed.

TABLE III.—*Results of tests of samples of seed obtained in the open market as orchard grass seed and found to be adulterated or misbranded.*

Seed offered for sale or sold as orchard grass by—		Seed obtained by—	Seeds and inert matter found upon analysis of samples.			
Name of dealer.	Address.		Orchard grass seed.	Rye-grass and meadow fescue seed.	Other seeds.	Dirt and chaff.
St. Louis Seed Co.	Fourth Street and Lucas Avenue, St. Louis, Mo.	Mail (sample)...	<i>Per ct.</i> 65.50	<i>Per ct.</i>	<i>Per ct.</i> 1 6.77	<i>Per ct.</i> 27.73
Do.....	do.....	Purchase (bulk)...	59.95	.....	2 7.06	32.99
Scobie & Parker Co.	507 Liberty Street, Pittsburgh, Pa.	.....do.....	46.88	15.30	9.41	28.41
Simpson Seed & Floral Co.	1551 Champa Street, Denver, Colo.	Mail (sample)...	.....	97.42	2.00	.58
Do.....	do.....	Purchase (bulk)...	.....	97.35	2.06	.59
Stoecker Seed Co.	Peoria, Ill.	.....do.....	71.57	.....	3 9.48	18.95
Stumpp & Walter Co.	50 Barclay Street, New York, N. Y.	Mail (sample)...	76.06	4.67	4 12.72	6.55
Do.....	do.....	Purchase (bulk)...	61.61	16.11	3.65	18.63
Yuess Gardens Co.	91 Water Street, Newburgh, N. Y.	Mail (sample)...	.....	81.64	6.51	11.85
Do.....	do.....	Purchase (bulk)...	15.98	24.00	5 40.47	19.55

¹ Smooth chess, 6.16 per cent.

² Smooth chess, 6.42 per cent.

³ Smooth chess and chess, 5.95 per cent.

⁴ Tall meadow oat-grass, 5.17 per cent; *Bromus pratensis*, 6.04 per cent.

⁵ Redtop or bent-grass, 21.42 per cent; tall meadow oat-grass, 12.67 per cent.

As has been formerly stated in its publications, the Department of Agriculture will examine and report promptly as to the presence of adulterants and dodder in any samples of seed submitted for that purpose. According to the location of the sender, these samples may be submitted to the Seed Laboratory at Washington, D. C., or to any of the following laboratories maintained through the cooperation of this department: Branch Seed-Testing Laboratory, Agricultural Experiment Station, Columbia, Mo.; Branch Seed-Testing Laboratory, Agricultural Experiment Station, Baton Rouge, La.; Branch Seed-Testing Laboratory, Oregon Agricultural College, Corvallis, Oreg.; Branch Seed-Testing Laboratory, Purdue University, La Fayette, Ind.; Branch Seed-Testing Laboratory, California Agricultural Experiment Station, Berkeley, Cal.

B. T. GALLOWAY,
Chief, Bureau of Plant Industry.

Approved:

D. F. HOUSTON,
Secretary of Agriculture.

WASHINGTON, D. C., March 10, 1913.

